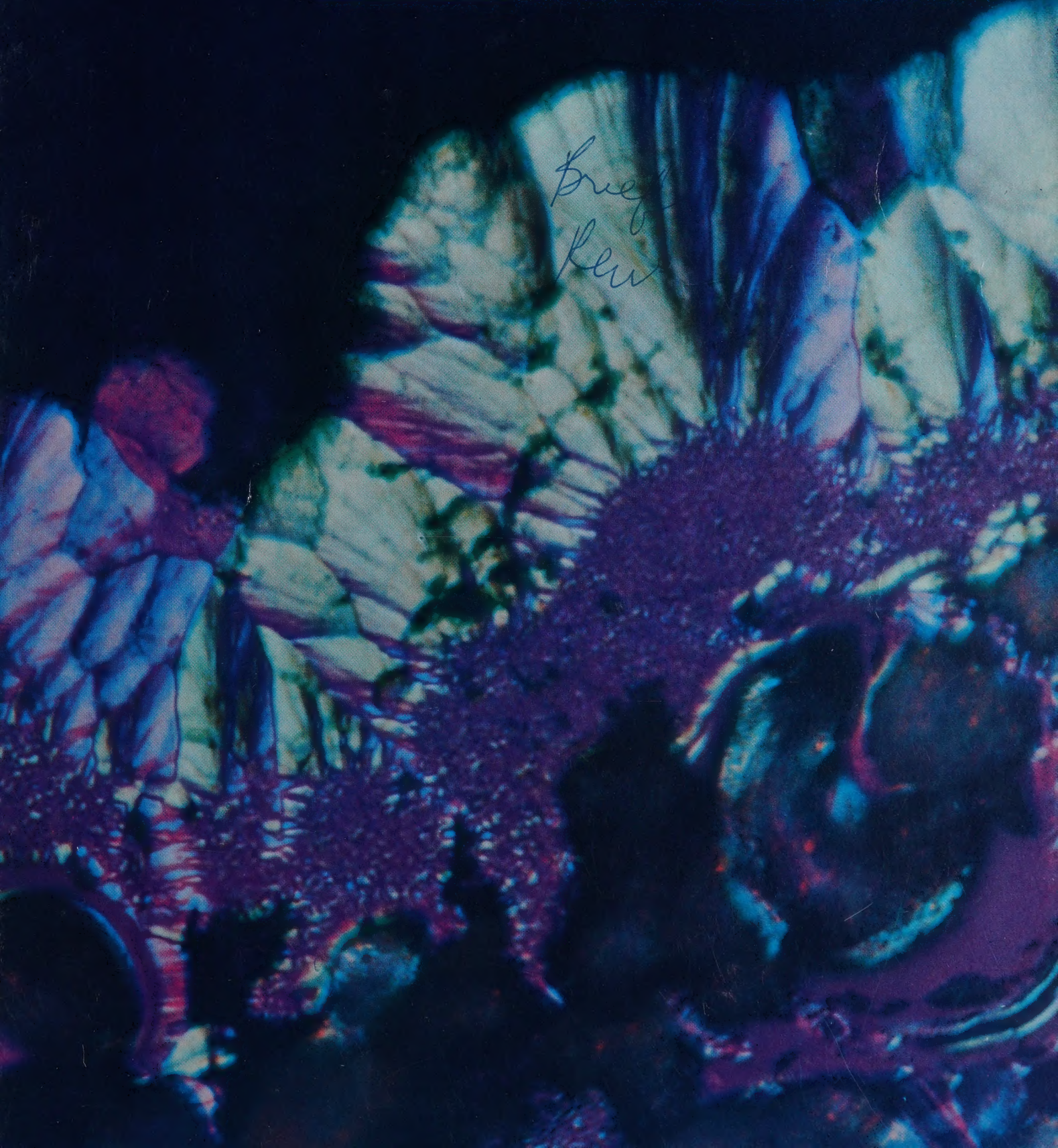


AR46

# Arco ANNUAL REPORT 1964

Brief  
Review





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## **STOCK TRANSFER AGENT:**

*Schroder Trust Company,  
57 Broadway, New York, New York 10015.*

## **REGISTRAR:**

*Bankers Trust Company,  
16 Wall Street, New York, New York 10015.*

## **CO-TRANSFER AGENTS:**

*The First National Bank of Chicago,  
38 South Dearborn Street, Chicago, Illinois 60690.*

*Bank of America National Trust and Savings Association,  
1 South Van Ness Avenue, San Francisco, California 94120.*

*Crown Trust Company,  
302 Bay Street, Toronto, Ontario, Canada.*

## **CO-REGISTRARS:**

*Harris Trust and Savings Bank,  
115 West Monroe Street, Chicago, Illinois 60690.*

*Wells Fargo Bank,  
464 California Street, San Francisco, California 94120.*

*The Canada Trust Company,  
110 Yonge Street, Toronto, Ontario, Canada.*

## **TRUSTEE:**

*Convertible Debentures—Bankers Trust Company,  
16 Wall Street, New York, New York 10015.*

## **LISTING OF SECURITIES:**

*Common Stock and Convertible Debentures—  
New York Stock Exchange,  
Midwest Stock Exchange.  
Common Stock—  
Toronto Stock Exchange.*

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# BOARD OF DIRECTORS

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**Kendrick R. Wilson, Jr.,\*** *Chairman*

**George E. Allen\***

**Earl H. Blaik\***

**James Bruce\***

**Martin W. Clement\***

**Neil J. Curry**

**C. Coburn Darling**

**Rudolph H. Deetjen**

**John R. Gosnell** 

**Robert L. Johnson**

**Frederick W. P. Jones**

**Herman H. Kahn**

**Arthur Kantrowitz**

**James R. Kerr\***

**Edward H. Litchfield**

**Daniel K. Ludwig**

**John A. McDougald**

**Matthew A. McLaughlin\***

**William I. Myers\***

**Benjamin H. Namm**

**Arthur E. Rasmussen**

**James D. Shouse**

**Richard W. Yantis**

*\*Executive Committee*

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# OFFICERS

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**Kendrick R. Wilson, Jr.,** *Chairman of the Board and Chief Executive Officer*

**James R. Kerr,** *President and Chief Operating Officer*

**Earl H. Blaik,** *Chairman of the Executive Committee*

**Arthur Kantrowitz,** *Vice President*

**E. Douglas Kenna,** *Vice President*

**Matthew A. McLaughlin,** *Vice President and General Counsel*

**John M. Mihalic,** *Group Vice President*

**Henry J. Oechler,** *Vice President, International Operations*

**Arthur E. Rasmussen,** *Financial Vice President*

**Curry W. Stoup,** *Group Vice President*

**Richard W. Yantis,** *Vice President*

**Frank S. Larson,** *Treasurer*

**Gordon M. Tuttle,** *Secretary*

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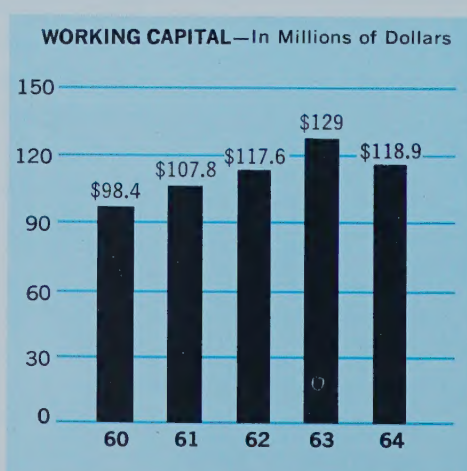
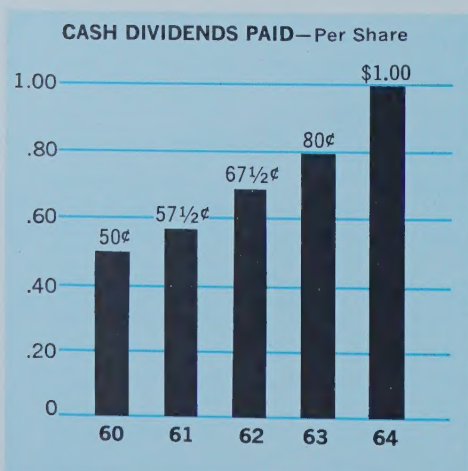
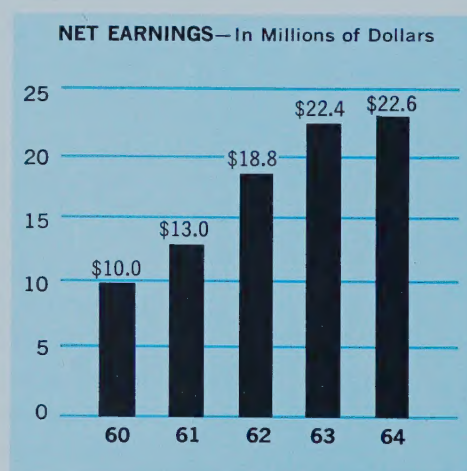
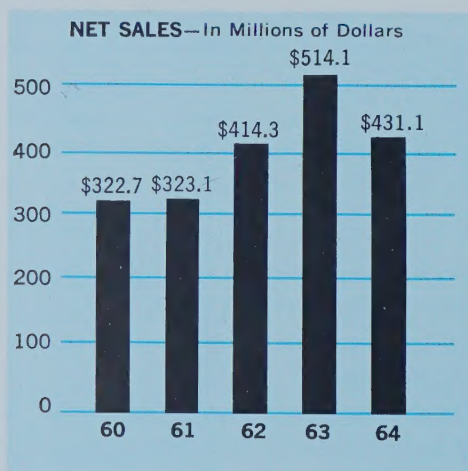
**AVCO** CORPORATION

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# AVCO CORPORATION

## FINANCIAL HIGHLIGHTS

	Year ended November 30 <b>1964</b>	Year ended November 30 <b>1963</b>
Net sales .....	\$431,075,716	\$514,132,435
Earnings before income taxes .....	\$44,544,540	\$46,792,997
Net earnings .....	\$22,644,540	\$22,432,997
Net earnings per common share .....	\$2.05	\$2.00
Working capital .....	\$118,948,068	\$128,991,575
Cash dividends per common share .....	\$1.00	\$0.80
Number of holders of common stock .....	81,615	85,974





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## REPORT OF THE CHAIRMAN AND PRESIDENT

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### *To the Stockholders of Avco Corporation:*

In 1964 Avco had the highest net earnings in its history. It was the fifth consecutive year in which net earnings were increased.

For the fiscal year ended November 30, 1964 consolidated net earnings were \$22,644,540, equal to \$2.05 per share, compared with 1963 earnings of \$22,432,997, or \$2.00 per share. Earnings per share were computed on an average of 11,048,255 shares outstanding in 1964, compared with an average of 11,199,877 shares in 1963.

Consolidated net sales were \$431,075,716 in 1964, compared with \$514,132,435 in 1963. The decline in sales resulted principally from completion in early 1964 of a major government contract.

Dividends of \$1.00 per common share were paid in 1964, the fifth consecutive year of increased payments.

During the year Avco acquired in the open market 431,600 shares of its common stock, and its convertible debentures in the principal amount of \$2,230,000. The company intends to make additional purchases in 1965.

During the past year Avco undertook two important actions which should favorably affect future earnings growth.

First, Avco has entered the growing field of diversified financial services through the acquisition of Delta Acceptance Corporation Limited. Delta and its subsidiaries make loans to individuals and companies, finance purchases and sales on deferred payment plans, and operate industrial banks and insurance businesses.

In the past ten years, Delta's business has grown steadily. To provide for future growth, Delta and its subsidiaries have each year incurred substantial costs in establishing new branches and subsidiaries, and at November 30, 1964 they operated a total of 211 offices in Canada and the United States. In the

current year operations at approximately 50 additional locations are planned.

Delta's earnings are expected to increase not only from continued growth from within, but also from the acquisition of new businesses in the field of financial services, and from reductions in interest costs on borrowed funds.

Since the acquisition of Delta became effective on December 7, after the close of Avco's fiscal year, Delta's earnings are not included with Avco's in 1964 but will be in 1965.

In a second important move, Avco and Meredith Publishing Company have formed an equally-owned corporation, Meredith-Avco, Inc., to engage in the rapidly growing community antenna television (CATV) business. A CATV system provides additional and improved television reception by receiving television signals at a central antenna and amplifying and redistributing the signals by cable to subscribers' television sets. At the close of the fiscal year Meredith-Avco and its wholly-owned subsidiaries held 17 licenses for CATV systems, of which five had been constructed and were in operation. In addition, Florida TV Cable Inc., which is equally owned by Meredith-Avco and another company, operated CATV systems in three communities in Florida and held CATV licenses from ten other communities in that state.

Meredith-Avco is actively seeking additional CATV systems both by acquisition of existing systems and by applications for new licenses.

In 1964 Avco's commercial operations, consisting principally of broadcasting, specialized farm equipment and engines for utility and business aircraft, produced 47 per cent of the company's profits. In 1965, with the com-

pany's new businesses, commercial operations are expected to produce more than 60 per cent of the company's profits.

Avco's government business is characterized by extensive research and by development and production of items having the potential for satisfactory profit margins. Defense and space contracts have been sought only in areas in which the company holds exceptional capabilities.

Avco is associated with a wide range of defense and space programs. Consequently the company is in a good position to respond to changes in government needs, whether retaliatory intercontinental weapons, materiel for limited warfare, or research and production for space programs.

Additionally, Avco's extensive research and development activities have important commercial potential which the company is vigorously pursuing. They include magnetohydrodynamic power generation, medical equipment, and high temperature materials and equipment for their application.

We believe Avco's strong position in the businesses in which it has been engaged for many years, and its expansion into new fields of substantial promise, provide a sound basis for future growth.

The company records with sorrow the sudden passing on January 3, 1965 of Walter A. Mogensen, who joined Avco in 1934 and served for many years as vice president, treasurer and director. He relinquished his duties as an officer upon retirement in 1955, remaining as a director until the time of his death.

On behalf of the Board of Directors we thank you, the stockholders of Avco, for your support.

By order of the Board of Directors

A handwritten signature in blue ink that reads "Kendrick R. Wilson". The signature is fluid and cursive, with a large initial "K" and a stylized "J" at the end.

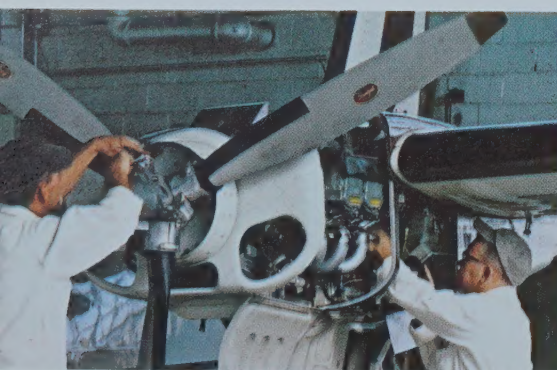
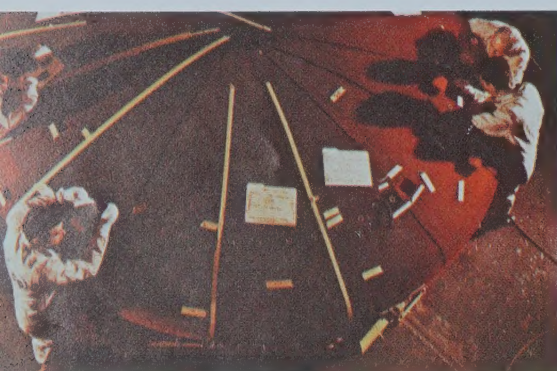
Chairman

A handwritten signature in blue ink that reads "James R. Ken". The signature is cursive, with a large initial "J" and a stylized "K".

President

January 29, 1965





# AVCO CORPORATION

## OPERATING DIVISIONS

### AEROSPACE STRUCTURES DIVISION

#### Nashville, Tennessee

Structures and assemblies for space vehicles, rocket boosters, missiles, aircraft and helicopters—aluminum and stainless steel honeycomb panels, thermal control panels—rocket nozzles, chambers and thrust termination tubes—Avcold and Uni-Reef shipping containers—metal office furniture and major appliances manufactured under contract.

### AVCO-EVERETT RESEARCH LABORATORY

#### Everett and Haverhill, Massachusetts

Reentry physics—plasma dynamics—magnetohydrodynamic (MHD) power generators for commercial and military applications—superconductive devices—space science and technology—medical technology—laser technology.

### ELECTRONICS DIVISION

#### Cincinnati, Ohio

Combat communications systems—receivers, coders and decoders for space vehicles—command and destruct receivers for missiles—telemetry—infrared and electro-optical systems—field services.

### LYCOMING STRATFORD DIVISION

#### Stratford, Connecticut

Gas turbine engines for aircraft and helicopters—marine and industrial engines—engine components—missile reentry vehicles and structural components—rocket motor cases—fuel and oxidizer tanks—ground support equipment for missiles—hydrofoil vehicles—constant speed transmissions—precision sheet metal fabrication—aircraft mechanical controls.

### LYCOMING WILLIAMSPORT DIVISION

#### Williamsport, Pennsylvania

Reciprocating engines for aircraft and helicopters—multifuel engines for automotive type applications—engine components—residential and commercial heating boilers—precision sheet metal fabrication—heat treating and plating—hardened and ground precision parts—sewage treatment equipment.

### NEW IDEA DIVISION

#### Coldwater, Ohio; Fort Dodge, Iowa

Corn pickers, corn snappers, corn picker-shellors, corn picker-grinders—manure spreaders—farm wagons—farm elevators—hydraulic loaders and attachments—rotary cutters, mowers, hay conditioners, flail mower-conditioners—parallel bar rakes—Uni-System corn harvesting and small grain combine equipment—fertilizer spreaders.

### Ezee Flow Division, Chicago, Illinois

Fertilizer and lime spreaders—corn planter insecticide-herbicide applicators.

### Barn-O-Matic Division, New London, Wisconsin

Barn cleaners—silo unloaders—bunk feeders.

### ORDNANCE DIVISION

#### Richmond, Indiana

Special non-nuclear ammunition and ordnance—anti-armor and anti-personnel weapons—missile arming and fuzing—missile, mine, mortar and artillery warheads—special weapons for limited warfare—tactical weapons systems.



## RESEARCH AND ADVANCED DEVELOPMENT DIVISION

### Wilmington, Lowell and Lawrence, Massachusetts

Ballistic missile reentry systems—space vehicle systems—marine systems and products—propulsion subsystems—supporting and exploratory research—environmental test systems and equipment—plasma spray equipment and metallizing systems—composite materials—medical science technology and products.

## TULSA DIVISION

### Tulsa, Oklahoma

Radiation detectors and dosimeters—space environment effects on materials—space simulation equipment—flight-rated geophysical instrumentation—mass spectographic analysis of nuclear fuels—cryogenic systems and components—vapor cleaning equipment for military and industrial uses.

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## AVCO DEFENSE AND INDUSTRIAL PRODUCTS GROUP

Washington, D.C.; Dayton, Ohio; Houston, Texas; Los Angeles, California

### AVCO MISSILE MANAGEMENT CENTER

Stratford, Connecticut

### AVCO MARINE ELECTRONICS OFFICE

New London, Connecticut

### AVCO INTERNATIONAL OPERATIONS

New York, New York; Washington, D.C.; Paris, France

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# PRINCIPAL SUBSIDIARIES

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## CROSLY BROADCASTING CORPORATION

### Cincinnati, Ohio

Radio station—WLW: Cincinnati, Ohio

VHF television stations—WLW-T: Cincinnati, Ohio • WLW-C: Columbus, Ohio

WLW-D: Dayton, Ohio • WLW-I: Indianapolis, Indiana

## AVCO DELTA CORPORATION

### New York, New York

Financial services.

## DELTA ACCEPTANCE CORPORATION LIMITED AND SUBSIDIARIES

London, Ontario, Canada; various locations in the United States

Personal loans—commercial and industrial financing—industrial banking—home improvement financing—general insurance other than life.

## MOFFATS LIMITED

Weston and Orillia, Ontario, Canada;

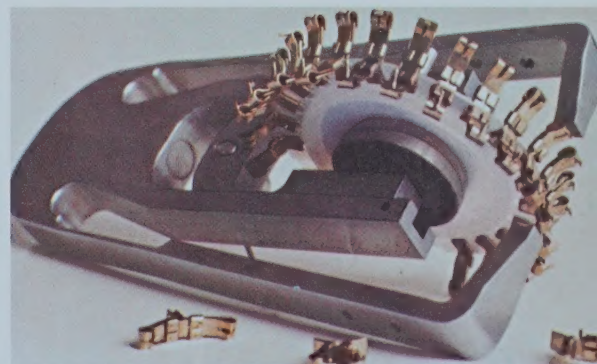
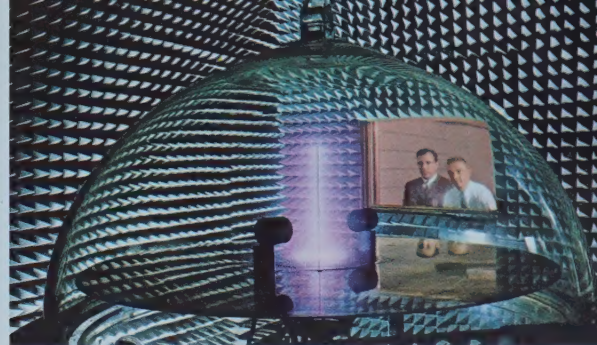
London, England; Uddingston, Scotland

Gas and electric free-standing and built-in ranges—refrigerators—clothes washers and dryers—coin-operated laundry and dry cleaning equipment—heating equipment—commercial cooking and food service equipment—water heaters—range heating elements.

## MEREDITH-AVCO, INC. (50 per cent owned)

New York, New York

Community antenna television systems.







Three-axis flight simulator being used at the Wilmington "Astro-lab" to test missile guidance and control system components.



# RESEARCH AND DEVELOPMENT

*Last year the majority of Avco's sales came from products growing out of research and development in the past decade. Today's research effort, broadly based to meet enlarged opportunities, is expected to yield significant future benefits to the company.*

In the last decade Avco has greatly expanded its research and development activities. Today, scientists, engineers and supporting personnel comprise a fifth of Avco's employees.

The importance of research is indicated by the fact that last year 60 per cent of Avco's business came from products the company has developed since 1954.

One significant example is the Avco gas turbine engine, which the company began to develop in 1950. Today more than 5,000 persons are employed in the research, development, production and sale of these engines.

A second example is in the field of reentry physics and gas dynamics. In 1954, Avco received its first contract for studying the problem of bringing an object safely back to earth after it had been fired into space. The solution was a prerequisite for a successful intercontinental ballistic missile program. Avco succeeded, and now reentry research and related production represent a substantial portion of the company's business. Constant improvements in technology have resulted in increasingly sophisticated anti-missile systems and correspondingly more advanced reentry vehicles.

Avco has built up a balanced program of company-sponsored research and development. About 20 per cent of the effort is devoted to projects which should reach their major profit potential within five to ten years; 30 per cent is devoted to those which are expected to be of major importance in two to five years, and 50 per cent to those which will provide new products or research contracts within

two years.

All divisions of Avco have planned research and development programs keyed to the five-year plan of the division and the corporate goals. As soon as any area of work directed toward fulfilling the requirements of the military or space programs shows promise, government contracts are sought. When these contracts are obtained, company funds so released are used to explore new ideas.

The divisions which carry out most of the exploratory and long range programs that will provide the new profit areas of Avco within the next decade are the Avco-Everett Research Lab-

oratory, the Research and Advanced Development Division and the Tulsa Division. In this long range work, association with universities is desirable in order to take advantage of the new scientific technologies resulting from their basic research, and to stimulate cross fertilization of ideas leading to new solutions of problems. At present special research projects are under way with a number of universities, hospitals and other institutions.

In general, most of the shorter range projects are carried out by the engineering staffs of the manufacturing divisions: Aerospace Structures, Electronics, Lycoming Stratford, Lycoming Williamsport, New Idea and Ordnance. In addition, these divisions carry out some longer range projects in the areas required to maintain leadership in established product lines, or to develop related product lines.

The company's Electronics Division,



Technicians of the Research and Advanced Development Division are shown applying the heat shielding material on an Apollo command module at the Lowell installation.





**This stabilized superconducting magnet is an important development by Avco-Everett.**

long regarded as a leader in ground and space communications, has contracts for the development of new, advanced single sideband ground and air communications equipment, including a new man-pack receiver and transmitter (transceiver) for battlefield use.

During the year an integrated circuitry laboratory was established at the Electronics Division which provides Avco with the capability of developing techniques for design, fabrication and application of integrated circuits and micro-electronic devices.

Much of Avco's research and development work on ordnance items is classified. However, the Ordnance Division announced last year a new hand-held weapon which fires a projectile with a built-in rocket motor to help propel it rapidly toward its target. Known as the Avroc 15-40, it will become one of a series of weapons ranging from those the size of sidearms to artillery pieces which can be mounted on motor vehicles, airplanes or helicopters.

Since 1962 the Lycoming Stratford Division has undertaken systematic development work on an advanced turbofan engine, which will provide higher take-off thrust and better fuel economy than existing jet engines and turbofans in the 5,000-pound thrust range.

Lycoming Stratford is expanding its technological capabilities in advanced turbine engineering.

Greater emphasis is being placed on development of marine and industrial turbines. A 1,000-hour qualification test is being conducted on the TF-20 gas turbine engine installed in an Avco-designed test boat known as the MTB. A turbine-powered amphibious hydrofoil landing craft, called the LVH, was delivered to the U.S. Marine Corps for further evaluation.

The Lycoming Williamsport Division continued to devote important research efforts to new and improved reciprocating engines for business and utility aircraft. It also made steady progress in the development of multi-fuel engines during the year. A four-cylinder prototype has been installed in military vehicles and an eight-cylinder version has entered the advanced testing stage.

Important research and development advances in materials and methods of fabrication are enhancing Avco's position as a producer of aerospace structures, rocket motor cases and aircraft structures. New methods of forming and joining materials such as beryllium and titanium were developed during the year.

The Lycoming Stratford Division produced the first hot shear spun

beryllium domes. This greatly improves the possibility of utilizing beryllium, which has high strength-to-weight characteristics but which has been difficult to form.

The Aerospace Structures Division developed a new method of joining thin gauge aluminum called fluxless brazing. The method is useful for fabricating superior quality cold plates which prevent electronic gear in aerospace structure vehicles and rocket motors from becoming overheated. This resulted in contracts for cold plate production.

The Research and Advanced Development Division has been studying structural materials of the future for aerospace applications. The development of a composite of boron fibers and high temperature plastics is partially funded by the Air Force. If composite materials of this type can be successfully developed, very significant weight reductions in aircraft and aerospace structures can be achieved. In addition, foam plastics suitable for protecting space vehicles from meteorite damage were developed and tested.

These advanced materials capabilities are an outgrowth of Avco's pio-



**A model similar to this MHD generator at Haverhill will be used by the Air Force in a powerful wind tunnel. This marks the first practical application of MHD generation.**



neering work in developing reentry vehicle systems for the Air Force. Now Avco is conducting research on advanced reentry systems capable not only of surviving the physical aspects of reentry, but also of penetrating anti-missile defenses being developed.

Because of its competence in reentry physics and materials, Avco was selected to provide the thermal protection systems for NASA's Apollo command modules. These spacecraft will carry this country's first lunar voyagers to the moon and return them to earth.

The first of the Apollo capsules are currently at the Lowell, Mass., facility for installation of the heat shields. It is at this facility that specialized manufacturing techniques have been developed for such work.

During 1964, design and feasibility studies were completed for the NASA Voyager and Advanced Mariner vehicles by the Research and Advanced Development Division. One objective of these craft is to determine whether there is life on Mars.

The Research and Advanced Development Division accelerated preparations for a major role in the forthcoming interplanetary space exploration programs. The company invested \$1 million in new space laboratories, which include an "Astrolab" containing a celestial simulator.

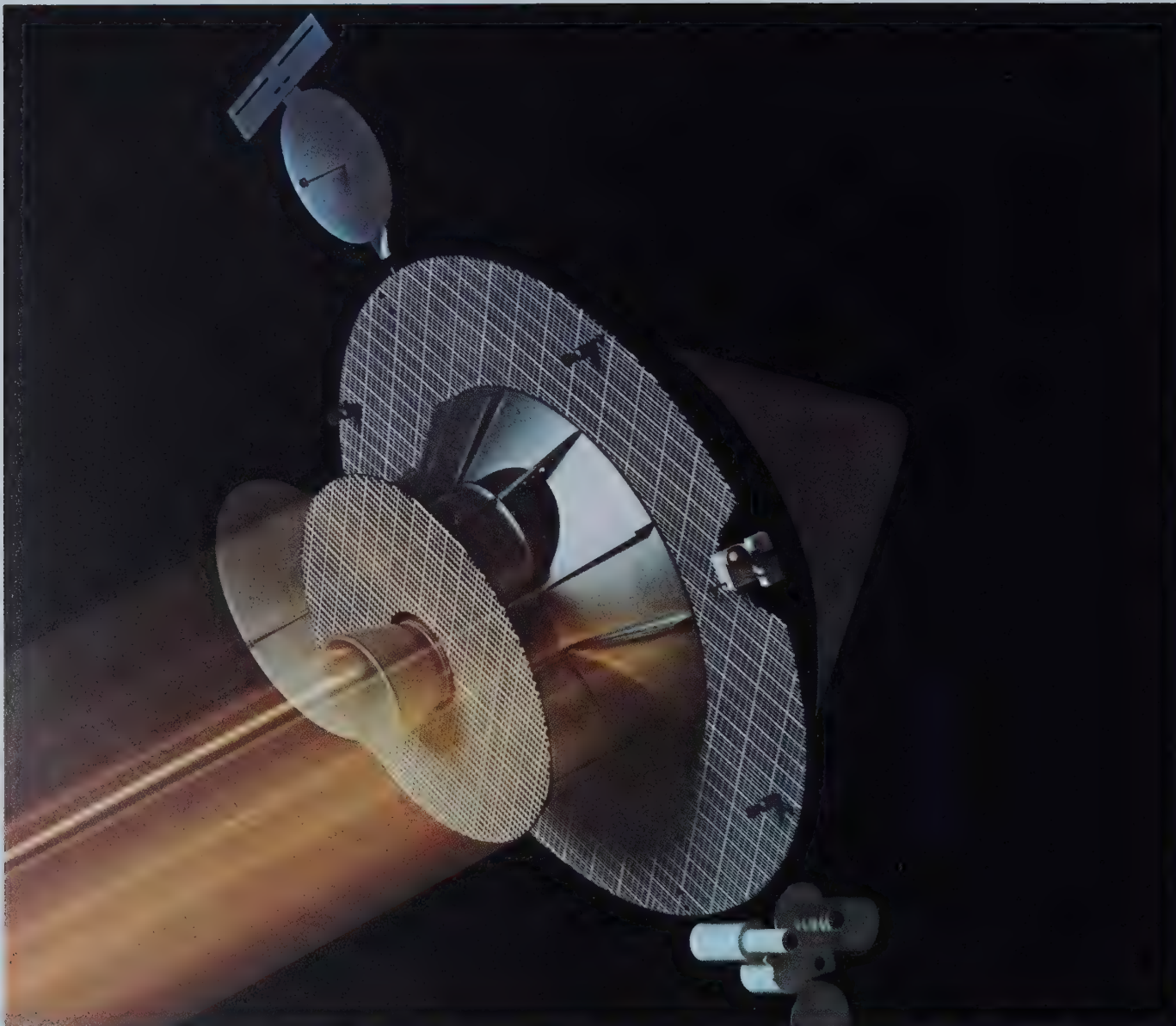
Company-sponsored research in support of interplanetary exploration was initiated in 1963. Projects were inaugurated to define the guidance and control systems, space power supplies, thermal control and space communications systems required for the mission.

The Tulsa Division, since its inception, has been engaged in research and development on the effects of the space environment on engineering and biological materials. During the course of this work a number of instruments for measuring the properties of the space environment during space flights have been developed. These may become required devices for all space vehicles. Also, laboratory space simulators are being built for

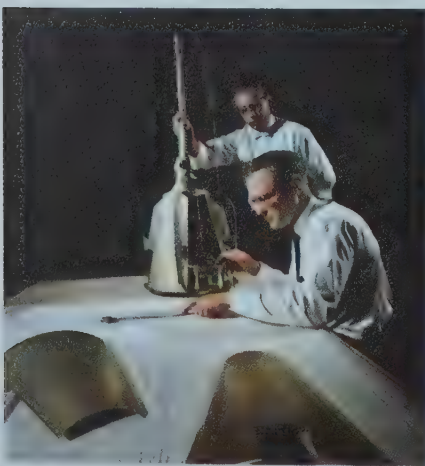


At the high altitude antenna laboratory in Wilmington, a radio antenna giving off powerful signals causes a glow in the special atmosphere created in a plastic sphere to simulate conditions on the surface of Mars. The test is being conducted in an anechoic chamber which eliminates the transmission-distorting echoes of electromagnetic energy.





Avco's space projects include a Voyager study. One objective of the flight will be to learn about the possibility of life on Mars.



A geocorona probe, designed to measure the helium layer surrounding Earth, is given a close inspection by the Tulsa staff.

NASA, and space suit materials are being tested.

One of the areas of research and development effort which may lead to significant profits in the future is magnetohydrodynamics (MHD). A major objective is the production of cheap commercial power by direct conversion of heat to electricity.

The MHD power generation studies have been conducted in the Avco-Everett Research Laboratory, which has an international reputation as a leader in MHD research. Both private and government-sponsored MHD research projects are in progress.

For the past five years, 12 leading

public utilities, represented by the American Electric Power Service Corporation, have joined with Avco in research and development in the field of commercial MHD power generation.

In 1964 it was shown that "seeding," the addition of an impurity which improves the ability of a gas to conduct electricity, was technically and economically feasible. Also, there was important progress in the development of long duration electrodes.

Two other important new achievements in the development of MHD electric power generators occurred during the year.

First, the prototype of a new genera-



tor being developed for the Advanced Research Projects Agency of the Department of Defense produced, for short durations, more than 11 million watts—probably the greatest output ever to be achieved by an MHD generator. This generator is designed ultimately to produce a gross output of 35 million watts.

On the basis of this work the laboratory received an Air Force contract to build an MHD-powered 20 million-watt wind tunnel. MHD generators are especially suited to operate devices requiring very large bursts of power.

The second achievement was the successful application of the technique of nonequilibrium ionization to produce "hot electrons," by which gas is made electrically conducting at a lower temperature.

Before this process was developed, MHD generators ran at especially high temperatures—in the order of 5000°F. The new technique has enabled an MHD generator to operate at 2900°F. The importance of this achievement is that it opens the possibility of using a nuclear reactor as well as fossil fuel to heat the gas.

At present the magnetic field for MHD generators is supplied by an electromagnet. In self-sustaining generators part of the electricity produced by the generator is required to maintain the magnetic field. Studies indicate that high field strength superconducting magnets can be developed to replace electromagnets, thereby increasing power generation efficiency.

During the year the Avco-Everett Research Laboratory constructed the world's largest high field strength superconducting magnet for the Argonne National Laboratory. The device is being used with Argonne's new 12.5 billion electron volt zero gradient synchrotron. The powerful magnet has a 10-inch diameter bore and a field strength of 32,800 gauss, and gives promise that a magnet of suitable size can be developed for commercial power generation.

Avco has made progress in the area of marine technology. Additional applications of the company's variable

pitch ship propellers with lock-in pitch device appear imminent. The Tulsa Division is cooperating in the development of a marine dosimeter to measure radiation due to fallout or underwater nuclear explosions.

Another significant area of research for Avco is medical science technology. This includes extensive studies of the properties of chromosomes, the threadlike bodies which carry the key

to heredity and are important in the studies of genetics.

Avco has developed improved medical instruments and surgical aids. Working in collaboration with Maimonides Hospital of Brooklyn, the Avco-Everett Research Laboratory has developed a small electronic device designed to alleviate urinary bladder disorders of many of the nation's 250,000 paraplegics.



This amphibious hydrofoil vehicle, which was developed by Lycoming Stratford for the Marine Corps, has a 10,000-pound cargo capacity and can travel on land or water.



Developed by the Ordnance Division, this hand-held Avroc 15-40 fires a projectile with a built-in rocket. This new concept can be adapted to artillery pieces or sidearms.





A Uni-System combine with a corn head is one of four interchangeable harvesting units in this new system of implements.



# COMMERCIAL AND INDUSTRIAL OPERATIONS

*Avco's aircraft engine business increased, new farm equipment lines were introduced, broadcasting and other commercial operations progressed. In 1965 growing commercial activities are expected to produce 60 per cent of total profits.*

During 1964 commercial and industrial activities accounted for 47 per cent of the corporation's profits, and the total is expected to rise to more than 60 per cent in 1965. Avco's principal commercial and industrial products and services in 1964 were reciprocating engines for private and business aircraft, specialized farm equipment, and television and radio broadcasting. The company also produces heating boilers, sewage treatment systems, kitchen ranges and metal office furniture.

Last year commercial sales of re-

ciprocating aircraft engines by Lycoming Williamsport were the highest in its history. The outlook for 1965, with the utility aircraft industry anticipating further expansion, is one of continued high sales.

There are approximately 91,000 airplanes in the business and utility fleet today and the number is expected to reach 100,000 by the end of 1965.

Supporting this projection is the fact that commercial airlines are bypassing more and more airports, and the fact that engine improvements have led to a growing use of business

and utility aircraft, especially for short trips.

Lycoming, a major producer of engines for such aircraft, powers more types than any other engine manufacturer.

The division introduced and delivered several new models of engines during the year. Some of these were designed to meet the needs of new aircraft to fly higher and faster, and to provide greater in-flight comfort. Others have been used to improve the performance of planes already on the market.

In addition to reciprocating aircraft engines, Lycoming Williamsport produces Spencer Heaters. Sales of this line showed an increase during the year, as several new models were introduced for both commercial and residential applications.



A complete maintenance and repair service is provided by personnel at Williamsport for Lycoming-powered business and utility aircraft.



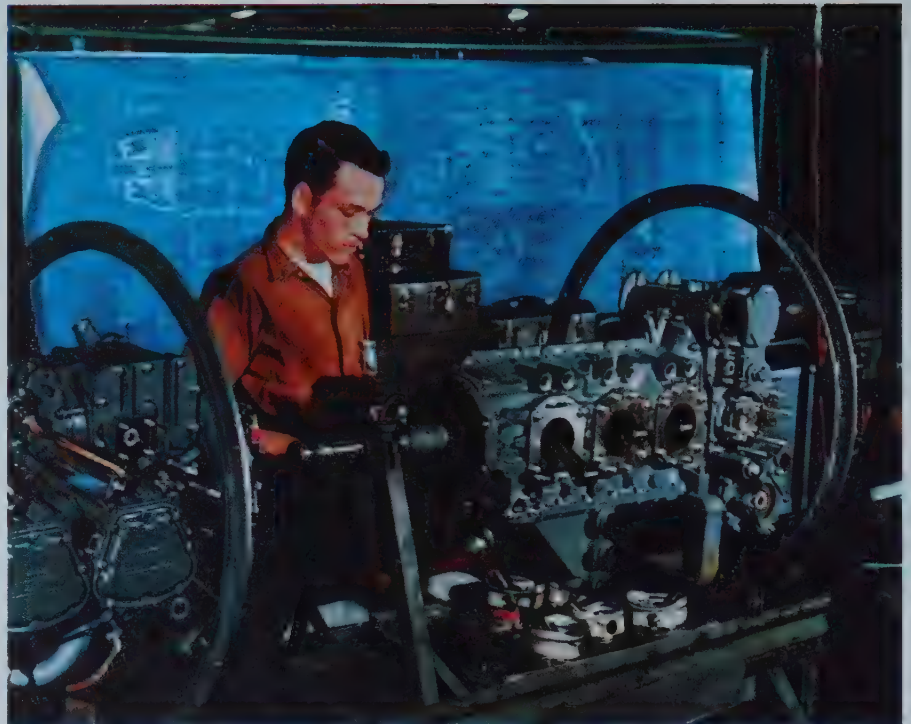
Another Williamsport product line is the Spencer sewage treatment system, which was introduced a year ago and has been favorably received in test market areas. The need for an economical, efficient sewage treatment facility for homes, schools, apartments, shopping centers and other commercial uses has gained growing recognition with the mounting concern over the pollution of the nation's lakes, rivers and streams.

Avco's farm equipment operations maintained approximately the same volume of business as in the preceding year, despite a drought in the corn growing areas that adversely affected sales of some implements.

A redesigned and improved line of Uni-System farm harvesting equipment, which is expected to bring significant changes to operations of medium and large-size farms, was introduced by the New Idea Division.

The Uni-System is particularly adapted to family-operated farms grossing more than \$10,000 a year. The number of such farms is increasing, and there is no other series of implements which gives farmers comparable economies and efficiencies.

Incorporating the dual advantages of being both self-propelled and interchangeable, the Uni-System provides a single power source to which may be attached interchangeable special harvesting implements for a variety of



Reciprocating engines made by the Lycoming Williamsport Division provide the power for more types of business and utility aircraft than those of any other manufacturer.

crops. The system can be used throughout the harvesting season and is not restricted to a single crop.

The farmer can place any one of the following harvesting machines upon the power unit as his requirements demand: a small grain combine, a combine with a corn head, a corn picker or a corn picker-sheller.

The machines can be attached to or removed from the power unit in approximately one hour without

hoists or special tools.

Other new farm products introduced during the year included a hydraulic loader for tractors, a rotary cutter for cleaning fields of crop residue and brush, a corn grinder for a two-row, pull-type picker and a 250-bushel manure spreader designed for large dairy and beef cattle operations.

Avco's Ezee Flow and New Idea Divisions introduced a complete new line of conventional fertilizerspreaders in 1964, and Barn-O-Matic added a new single auger silo unloader to its line of farmstead automation equipment.

In 1964, owners of New Idea and Uni-System equipment took the first three places in the picker-sheller division of the National Corn Picking Contest. Of the eight state champions eligible for national competition in this division, three operated New Idea picker-shellers and two operated Uni-shellers.

New Idea also received the "E" award from the U.S. Department of Commerce for excellence in the export field. The division has increased its exports 25 per cent since 1961 and its products are now used in 32 countries.



The New Idea Division began full production of its flail mower-conditioner in 1964. This dual purpose machine is used to cut and condition alfalfa for making dry hay.





Using fiber optic techniques in the medical technology field, Avco scientists and technicians have developed a retractor-illuminator for the delivery of light to deep surgical areas.



Contract manufacturing at the Aerospace Structures Division includes the production of major home appliances as well as the metal office furniture shown on the Nashville assembly line.

At the Aerospace Structures Division work done under contract for other firms is of increasing importance. In 1964, two large contracts were obtained for manufacture of commercial products. One calls for the production of Moffats-designed kitchen ranges and the other for production of metal office furniture. Production under these two contracts was commencing as the year ended.

The Research and Advanced Development Division has moved its Industrial Products Subdivision into new quarters at North Wilmington, Mass., and is expanding its product lines.

A versatile new series of composite coating materials called DiPaC was introduced. Combinations of heat resistance, wear resistance and other properties are designed into these materials.

The first application for DiPaC has been in friction couplings, such as heavy duty motor vehicle clutches and brakes. The brakes on the car that finished second in the 1964 Indianapolis 500-mile race were coated with DiPaC.

Two important products also marketed by the Industrial Products Subdivision are metallizing spray equipment and the Avco PlasmaGun. The Avco metallizing system consists of the Flamespray Gun and a complete line of metallizing materials for a va-

riety of industrial uses.

Earlier the division had introduced the PlasmaGun system (which has the capability of handling very high temperature materials) for spraying metals, ceramics and refractories to produce a surface coating with a wide range of hardness, density and special physical properties. Flamespray or PlasmaGun applications provide improved resistance to wear, corrosion and temperature extremes. The coat-

ings also may be used to increase either electrical conductivity or resistance as required.

The division is also expanding its line of medical equipment, including the Fiberay surgical illumination systems for use in medical examinations and surgery.

Moffats Limited, now in its 83rd year, is one of Canada's leading producers of commercial and home cooking equipment.



View of the rotisserie and control panel of the "Gourmet" line of gas and electric ranges marketed by Moffats in Canada. Moffats also sells the line in Great Britain.



The company's sales increased last year and Moffats retained its position as the largest seller of commercial cooking equipment in the Canadian market.

Crosley Broadcasting Corporation, Avco's wholly-owned subsidiary, continued to make a major contribution to earnings.

It is expected that the broadcasting operations will be increasingly important, as technological improvements bring TV and radio reception to greater audiences.

Increased hours of color telecasting is another reason for the anticipated growth. Crosley stations have been for many years leaders in color telecasting.

Direct international telecasts via satellites, practical portable television receivers and increased miniaturization of radios will add to the interest and use of both media.

Crosley Broadcasting Corporation's four VHF television stations—WLW-T, Cincinnati; WLW-C, Columbus;



Crosley Broadcasting continues to strengthen its "live" programming schedule by the expansion of established shows and the addition of programs with new personalities.

WLW-D, Dayton; WLW-I, Indianapolis, and radio station WLW, "The Nation's Station" in Cincinnati, increased sports coverage, expanded news programs, and aired more public service programs and more live shows than ever before.

The Crosley stations in Cincinnati

and Columbus are NBC network affiliates. WLW-I in Indianapolis is an ABC affiliate and the Dayton station carries programs from both ABC and NBC.

Last year was the 11th that Crosley has brought network color television to its viewers and the eighth that it has produced its own color telecasts.



This Comex news desk is the nerve center for Crosley Broadcasting's newsgathering operations. Mobile units cover on-the-spot news.



They started in 1957 with Ruth Lyons' "50-50 Club." In Cincinnati, WLW-T now broadcasts an average of 70 hours of color programming each week.

Facility expansion and station improvement programs were carried out at Dayton and Columbus. WLW-C doubled its studio facilities and added new color equipment in a \$1 million program, and WLW-D improved its technical facilities with the addition of new video tape, control and motion picture equipment.

All stations expanded their news-gathering facilities to bring news events more quickly to their audiences. A radio "hot line" was opened to the National Broadcasting Company to bring national news on the air within minutes. A fleet of automobiles equipped with two-way radios was placed in operation, and facilities installed at the studios to record directly from these cars, as well as from telephones, for instant rebroadcast. For radio, new recording equipment is used to produce "instant specials" for fast-breaking news. To bring the women's



**A helicopter and a fleet of radio cars help Crosley Broadcasting air comprehensive reports on a wide variety of topics, from fast-breaking news to traffic conditions.**

viewpoint to the news, women reporters have been added to station staffs.

During the year WLW stations received more than 100 awards for their public service activities. There was documentary programming on such subjects as education, civic issues, charity drives, highway safety, rede-

velopment projects and religion.

Crosley Broadcasting also expanded its sales operation with the formation of a wholly-owned subsidiary, Broadcast Communications Group, Inc., to serve as national spot sales representative for Crosley stations and other broadcasting outlets.

## AVCO EXPANDING INTO NEW FIELDS

*Avco has proceeded on its course of planned expansion by moving into growth areas which will substantially broaden the company's commercial operations.*

Avco has acquired Delta Acceptance Corporation Limited and its Canadian and U.S. subsidiaries, which provide a variety of financial services ranging from consumer loans to the operation of industrial banks and insurance businesses. In addition, Avco has formed with Meredith Publishing Company an equally-owned corporation, Meredith-Avco, Inc., which operates community antenna television systems, a rapidly growing service throughout the country. These new businesses materially expand Avco's operations in commercial fields.

### Avco Delta

Avco has organized a wholly-owned subsidiary, Avco Delta Corporation, which owns the stock of Delta Acceptance and will be the principal financing vehicle for Delta and its subsidiaries. Avco Delta is also seeking opportunities for further expansion in the field of financial services.

### Delta Acceptance

Delta Acceptance was founded in 1954. In the decade that has followed,

Delta and its subsidiaries have grown rapidly and at November 30, 1964 operated 211 offices in Canada and the United States. Approximately 50 additional offices are planned for 1965.

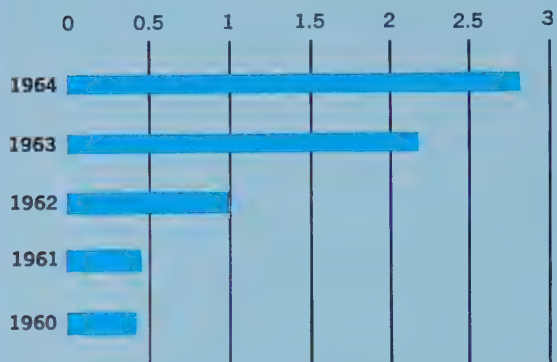
Delta has five main divisions. The Loan Division consists of The Crescent Finance Corporation, Limited, which was acquired by Delta in 1957, and three other subsidiaries. Loans are extended directly to individuals and are usually secured by chattel mortgages on automobiles and household goods. The division operates in every Canadian province.

The Acceptance Division, operating through the parent company and its subsidiary, Delta Acceptance Canada Limited, acquires retail installment sale contracts covering consumer pur-

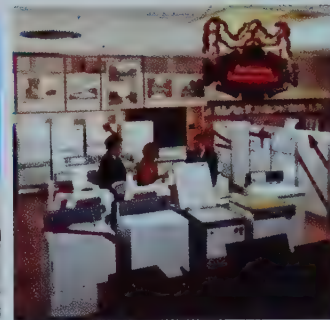
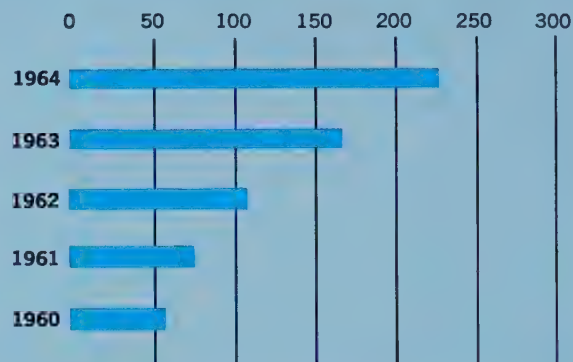


# DELTA ACCEPTANCE CORPORATION

NET EARNINGS (In Millions of U. S. Dollars)



RECEIVABLES (In Millions of U. S. Dollars)



Delta's financing activities include home improvement loans, capital equipment purchase loans, industrial banks and personal loans.

chases of automobiles, appliances and other durable goods. Advances and loans to dealers are also provided by this division. A capital equipment department provides commercial and industrial customers with financing on a broad range of revenue-producing equipment.

The Home Improvement Division consists of the Security Acceptance Corporation and 12 other subsidiaries which finance home improvements by purchasing customers' notes from building contractors and dealers. These notes usually are secured by supplemental mortgages on homes involved. At November 30, 1964 there were offices in 10 states in the United States.

Four indictments are currently pending in Bristol County, Mass., which allege violations by Security Acceptance of the Massachusetts Small Loans Law because of the nature of certain loans discounted in that state. In the opinion of Massachusetts coun-

sel Security Acceptance is not guilty and the discounting of the loans at issue is in fact exempt from the provisions of the law.

The Industrial Bank Division is comprised of five subsidiaries each of which operates an industrial bank in Colorado. The Colorado Industrial Bank was acquired by Delta in 1963 and is one of the largest industrial banks in the state in terms of total assets. Subsequently, Delta acquired the Englewood-Colorado Industrial Bank and incorporated three others. Such banks may provide most banking facilities except checking accounts and trust services.

Subsequent to Avco's acquisition of Delta, two suits were commenced in Colorado against Delta, its industrial bank subsidiaries, certain of their officers and directors and, in one case, the Colorado State Bank Commissioner. These actions allege, among other things, that Delta and its sub-

sidiaries are engaged in branch banking in violation of the laws of Colorado and in a conspiracy to monopolize the industrial banking business in the Denver area, and they challenge the legality of operations in the same building by Delta's industrial bank subsidiaries and its finance subsidiaries. Substantial damages are claimed, but both actions are being vigorously defended, and in the opinion of Colorado counsel neither will materially adversely affect Delta or its industrial bank subsidiaries.

The Insurance Division is composed of two subsidiaries: Adanac General Insurance Company of Canada, and the London and Midland General Insurance Company. Each is licensed to carry on a general insurance business other than life throughout Canada.

## Meredith-Avco

In 1964, Avco expanded into another area, the growing field of com-



munity antenna television (CATV) systems. Avco and Meredith Publishing Company formed Meredith-Avco, Inc., to establish, acquire and operate CATV systems.

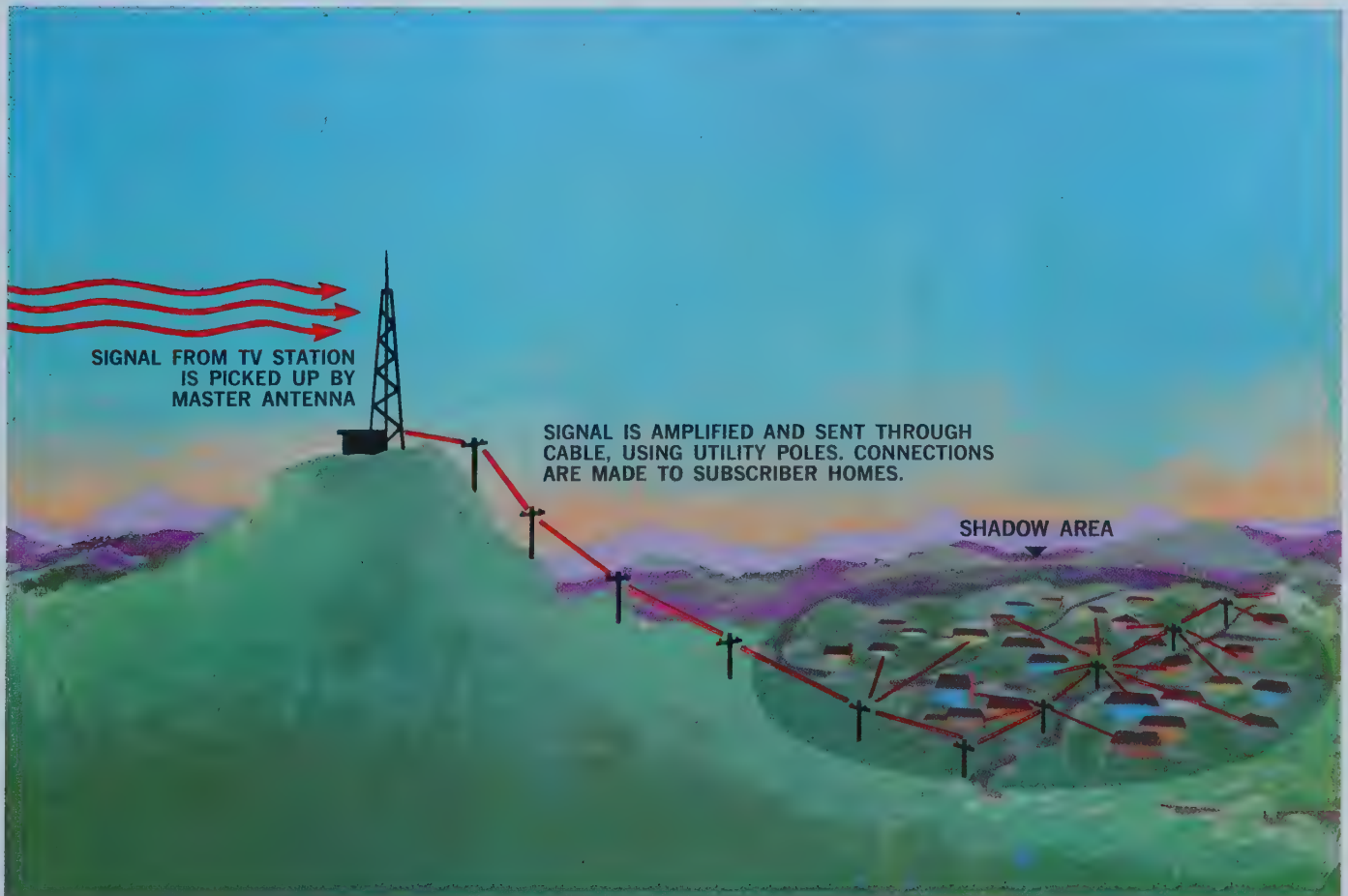
In CATV systems, signals are relayed from a large master antenna by cable to individual homes (see chart).

CATV overcomes reception difficulties in "shadow areas" caused by mountains or hills and also improves television reception in areas where distance from a transmitter causes viewer problems. Revenues are derived from installation and monthly fees for the service.

Original operations of Meredith-Avco centered in the Cape Kennedy area of Florida. Later the company purchased McLendon Cablevision Company, Inc., which included five CATV systems operating or near completion and franchises in eight additional communities located in Kentucky, Tennessee, Missouri, Arkansas, Mississippi and Alabama.

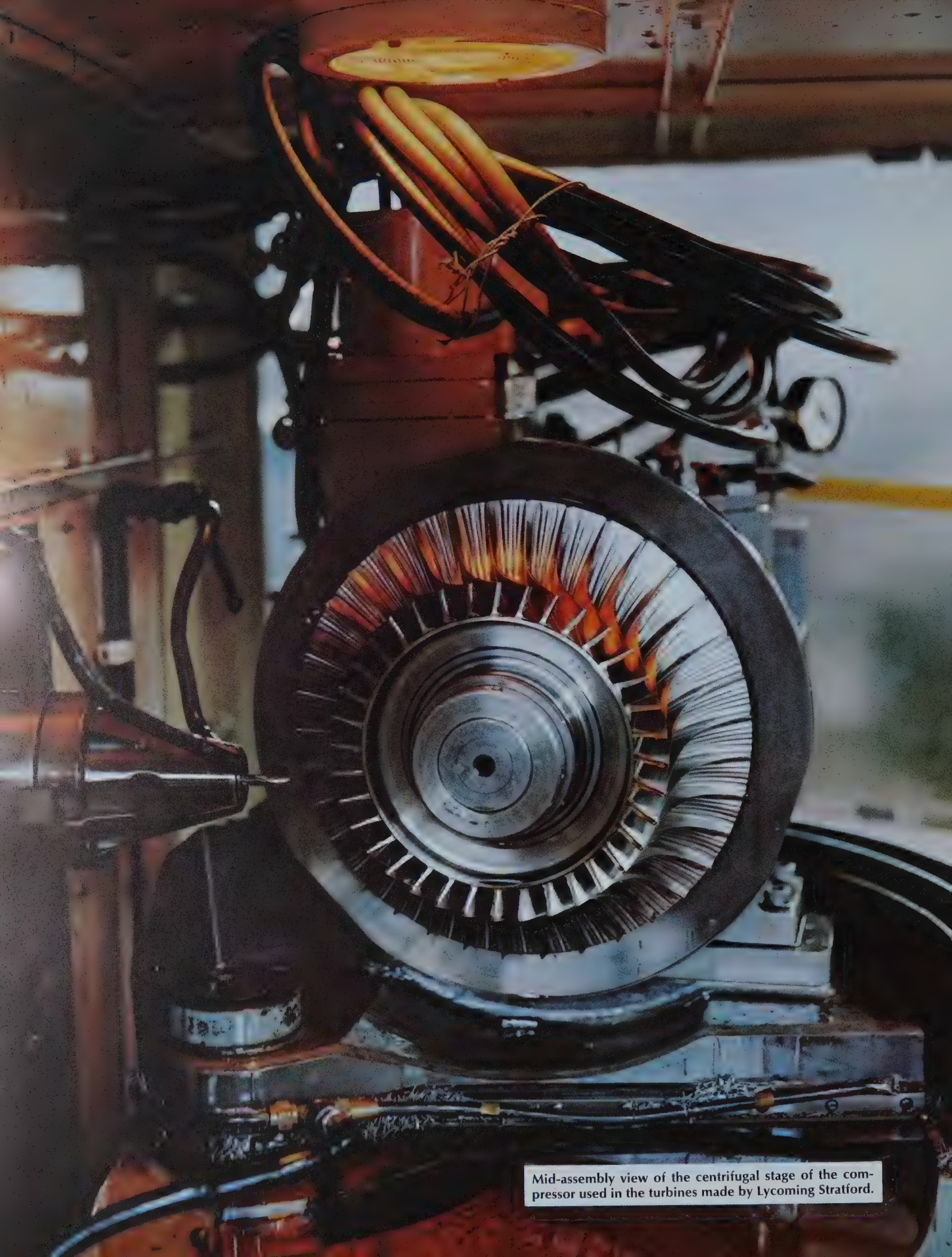


Cables are installed by a crew working from this truck of a Meredith-Avco subsidiary. CATV brings improved TV reception to a growing number of subscriber homes.



Sketch of a CATV operation showing the master antenna relaying signals by cable to subscriber homes located in the "shadow area."





Mid-assembly view of the centrifugal stage of the compressor used in the turbines made by Lycoming Stratford.



# DEFENSE AND SPACE PRODUCTION

*Avco continued its leadership in a wide range of defense and space programs. Special capabilities permit the company to respond to changes in government needs for missiles and materiel for limited warfare, and to meet the challenges of space.*

Avco's military and space manufacturing is centered in the fields of aircraft engines and components, airframe components, missile components, electronic equipment, ordnance and miscellaneous items such as precision machined parts for aircraft.

At the Lycoming Stratford Division, production of gas turbine engines continued to be the most important activity. The division received the largest production order in its history for T53 gas turbine engines, which power aircraft holding 23 of 61 world helicopter records.

The U.S. holds a total of 35 such world records, 29 of which were achieved with Lycoming power. Of this number, six were achieved with reciprocating engines manufactured at Williamsport, and the others with gas turbines produced at Stratford.

The most recent records were set in the fall of 1964 by the Army's Bell UH-1D. With the establishment of these new marks, the UH-1D holds 21 records for turbine-powered helicopters.

The top speed reached was 180.14 miles per hour and the altitude record set was 35,150 feet. Time-to-climb records were set at a number of altitudes.

This 15-place helicopter is the latest in the Iroquois series, which has seen extensive service in South Vietnam. It is armed with rockets and machine guns.

The T53 also powers the Navy's Bell UH-1E and the Air Force Kaman HH-43F.

Turboprop versions of the T53 were produced for the Army's Grumman OV-1 observation aircraft, also widely used in Vietnam.

Production of the more powerful T55 gas turbines was stepped up during the year, as a result of increased deliveries of the Boeing Vertol CH-47A helicopter to Army field units.

Manufacture of reentry vehicles, rocket chambers and other fabricated tankage used in missiles tapered off somewhat. However, deliveries of the Mark 11A reentry vehicle for the advanced Minuteman missile increased. The Titan/Atlas Mark 4 and the Minuteman Mark 5 programs were phased into support functions for units now on an operational basis.

The Lycoming Williamsport Divi-

sion, in addition to serving the commercial market with reciprocating engines for business and utility aircraft, continued to produce engines for the military.

Sales of reciprocating engines for military use should be increased during 1965 as a result of two competitions. In the first, the Hughes TH-55A, powered by a four-cylinder Lycoming engine, was selected as the Army's primary trainer. In the second competition, another Lycoming-powered helicopter, a version of the Bell OH-13S, was picked as the Army's instrument trainer.

The division began deliveries of turbocharged engines for the new Bell OH-13S observation helicopter and the Hiller OH-23 helicopter. The division's new engines also power fixed wing aircraft made by Aero Commander, Beechcraft, Helio and Piper for



This photograph shows one of the numerous Lycoming-powered utility aircraft that were built basically for the civilian market but are also being used by the armed forces.





Aerospace Structures makes the 81-foot long box beam assemblies used in each wing of these C-141 jet transports built by Lockheed.

both civilian and military markets.

The Aerospace Structures Division devoted the major portion of its capacity to the production of large assemblies for different types of aircraft. The number of projects and

overall volume increased during the year, and an even sharper rise is indicated for 1965.

Output of 81-foot long wing box beam assemblies, the 11,000 pound load-carrying sections of the wings of

the C-141 transport designed by Lockheed for the Air Force, was increased and will be stepped up further in 1965.

The first C-141's were turned over to the Air Force in late 1964 and placed in regular use by the Military Air Transport Service. Moreover, the division received the first orders for box beam assemblies for a commercial version of the huge jet-powered transport.

At the same time, the division continued its production of tail boom assemblies and cabin roof sections for the C-130 turboprop transport, also built by Lockheed for the armed services. This program, which has been under way since 1954, has been extended into 1966. The aircraft also is being sold throughout the western world in a commercial version.

The Aerospace Structures Division received a contract for production of tail boom assemblies and cabin roof sections for the UH-1D and UH-1B helicopters built by Bell and powered by Lycoming. This is only one example of the participation of two divisions in the same program, demonstrating the wide capabilities of Avco.

Aerospace Structures continued its



Of the 35 world helicopter performance records currently held by the United States, 29 were achieved by aircraft powered by Lycoming turbine and reciprocating engines.





**Thrust termination tubes are fabricated at Aerospace Structures for the solid fuel boosters to be used on the Titan III.**

work in the missile and space fields, producing components for a number of major projects. Manufacture of aluminum honeycomb parts for the Saturn rocket booster continued, and the first thrust termination tubes to be used in Titan III solid rocket boosters were delivered to the United Technology Corporation. Both the Saturn and Titan III programs are believed to have long term prospects.

The division also produces rocket nozzles and related parts as well as cooled honeycomb panels used to mount sensitive radios and other equipment aboard spacecraft.

The Electronics and Aerospace Structures divisions have established a special joint facility at Huntsville, Ala., to provide on-location support capabilities for the National Aeronautics and Space Administration's Marshall Space Flight Center.

The Electronics Division delivered its first countermeasures system for the F-111 aircraft that will eventually go into service with the U.S. Air Force and the Royal Australian Air Force. These units are being produced for the Fort Worth Division of General Dynamics Corporation.

Utilizing the latest electronics techniques, including micro-electronics, Avco's system combines high reliability with minimum weight.

The F-111 is designed to fly at speeds approximating Mach 2.5, which is two-and-one-half times the speed of

sound, and will be able to land and take off from carriers and short, rough airstrips.

Communications equipment being produced by the Electronics Division for space and missile use includes command-destroy receivers for destroying rockets or space boosters that go off course, telemetry equipment for the Saturn, and other devices to transmit data on engine performance, fuel consumption and vibration.

The division has developed additional receivers and decoders, and these and other communications equipment are used in a growing number of classified programs.

A new, specially equipped "white room" was constructed for the production of integrated circuitry components in controlled atmospheric conditions. The parts are so minute they must be assembled under powerful microscopes.

The "white room" is important to the production of space and ground communications equipment being developed by the division, and will also be used to produce certain components for special ammunition for the

Ordnance Division.

Avco's Ordnance Division is one of the major producers of ammunition for the armed services. It is expected that this work will continue at increased production rates.

The work of the Ordnance Division, in general, consists of the development and production of non-nuclear ammunition, air-to-ground and surface-to-surface warheads, anti-armor and anti-personnel weapons, fuzes and associated materials.

Arming and fuzing devices for Polaris, Titan and Minuteman missiles also are produced by the Ordnance Division.

The Research and Advanced Development Division is engaged in limited production of specially instrumented reentry vehicles for flight test purposes as a part of its numerous development programs in advanced reentry systems.

Among these are the REST program, LORV and Sleigh Ride. This division has, as part of this work, developed highly specialized manufacturing techniques which are currently being applied to the development and fab-



**The Electronics Division is producing the countermeasures system for the F-111 above. The aircraft has been selected for military use by Australia as well as the United States.**





In a specially-equipped "white room" at the Electronics Division, a powerful microscope is used to assemble tiny ammunition components for the Ordnance Division.



The Ordnance Division produces non-nuclear ammunition for artillery pieces and other weapons. It also makes special ordnance items, including arming and fuzing devices.

rication of the heat shields for the Apollo command modules, the spacecraft in which America's astronauts will reenter the earth's atmosphere on the return trip from the moon.

The first of the Apollo capsules are at Avco's Lowell facility for installation of the heat shields. It is at this facility that specialized manufacturing techniques have been developed for such work. A pilot plant, for example, has been established in which the materials research scientists work side by side with manufacturing engineers and technicians in "bench scale" development of materials fabrication techniques.

Once these are perfected, the team of manufacturing engineers and technicians move into the shop to be the core of large-scale manufacturing operations. Since the Apollo heat shield has varying thicknesses over the surface of the craft and must in all cases be machined to extremely close tolerances, giant lathes, numerically controlled, have been installed. They are capable of precisely contouring the entire surface of the Apollo command module in one continuous automated operation. Other advanced developments in the area of quality control and nondestructive testing have been employed to assure that each Apollo heat shield rigidly adheres to design requirements.

The Research and Advanced Development Division also performs defense-oriented service work. This includes testing of new types of torpedoes, Saturn booster fuel lines, and the computer consoles in the silos used by the Minuteman missiles.

The Tulsa Division received contracts from the National Aeronautics and Space Administration for the fabrication of specialized space simulation equipment, including its fifth contract for a space environment chamber.

This new and larger chamber will produce the space characteristics of ultra high vacuum, extremely low temperatures and a wide range of electromagnetic radiations similar to those from the sun.





A Lycoming Stratford worker keeps a close watch on the fabrication of a Mark 11A reentry vehicle for the advanced Minuteman.

Under a two-year Air Force contract, the Tulsa Division will manufacture more than 300 trailer-mounted liquid oxygen containers for the ground support of fighter aircraft. These 50 gallon tanks will be used to refill the pilot's oxygen supply between flights. A new design by Avco, this super-insulated container maintains the oxygen at 290 degrees below zero.

Related to the company's space and defense production work are several service activities performed by Avco divisions. An important and growing operation of the Electronics Division is its field engineering department, which provides technical services at military and other government installations around the world. Among the most important jobs undertaken by this department during 1964 were the operation and maintenance of meteorological and radar services for

the White Sands Missile Range.

The field engineering department also operated three aircraft for monitoring space vehicles reentering the earth's atmosphere. One plane was used to monitor a portion of the SNAP program operated by the Sandia Corporation on behalf of the Atomic Energy Commission. The program is concerned with the use of nuclear auxiliary power units needed for long-lived satellites and deep space probes.

Two other aircraft, operated by the Electronics Division under the direction of the Avco-Everett Research Laboratory, monitored reentry vehicles of ICBMs fired on both the Atlantic and Pacific missile ranges. The laboratory analyzed the data obtained from ICBM firings for both the Air Force advanced missile development program and the Army's anti-missile defense program.



This Polaris A3 is one of the major missiles equipped with arming and fuzing devices made at Ordnance Division in Richmond.



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# AVCO CORPORATION

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## 1964 FINANCIAL REVIEW

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### ARTHUR YOUNG & COMPANY

CERTIFIED PUBLIC ACCOUNTANTS

U. S. A., CANADA, MEXICO, SOUTH AMERICA  
GREAT BRITAIN, CONTINENTAL EUROPE  
MIDDLE EAST, SOUTH AFRICA, AUSTRALIA

165 BROADWAY  
NEW YORK, N. Y. 10006

The Board of Directors and Stockholders  
Avco Corporation

We have examined the accompanying statement of consolidated financial position of Avco Corporation and subsidiaries at November 30, 1964 and the related statements of consolidated earnings and additional paid-in capital for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. It was not practicable to confirm amounts due from the U.S. government, as to which we satisfied ourselves by means of other auditing procedures.

In our opinion, the statements mentioned above present fairly the consolidated financial position of Avco Corporation and subsidiaries at November 30, 1964 and the consolidated results of their operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

January 15, 1965





# AVCO CORPORATION AND SUBSIDIARIES

## Consolidated Earnings

	Year ended November 30 <b>1964</b>	Year ended November 30 <b>1963</b>
Net sales .....	\$431,075,716	\$514,132,435
Other income .....	975,066	555,003
	<u>432,050,782</u>	<u>514,687,438</u>
Costs and expenses		
Cost of sales .....	341,243,748	424,544,488
Selling and administrative expenses .....	35,706,097	31,945,410
Depreciation .....	6,234,061	6,506,776
Interest expense .....	964,820	1,214,404
Extra compensation (Note 5) .....	3,357,516	3,683,363
U.S. federal and Canadian income taxes (Note 6)	21,900,000	24,360,000
	<u>409,406,242</u>	<u>492,254,441</u>
<b>Net Earnings</b> .....	22,644,540	22,432,997
Cash dividends on common stock (\$1.00 per share in 1964 and \$.80 per share in 1963) ....	11,062,104	8,958,315
Increase in retained earnings .....	11,582,436	13,474,682
Retained earnings at the beginning of the year ...	87,135,463	73,660,781
Retained earnings at the end of the year (Note 4)	<u>\$ 98,717,899</u>	<u>\$ 87,135,463</u>

## Additional Paid-in Capital

Balance at the beginning of the year .....	\$ 34,725,267	\$ 32,816,860
Excess, over par value, of proceeds received on common stock issued on exercise of options (1964—37,787 shares; 1963—110,040 shares) . .	416,962	1,273,944
Excess, over par value, of principal amount of 5% convertible subordinated debentures converted into common stock, after adjustment for purchase of fractional shares, etc. (1964—\$191,600 converted into 16,547 shares; 1963—\$1,110,500 converted into 96,371 shares) .....	141,431	831,758
Excess of purchase price over principal amount (\$2,230,000 in 1964 and \$189,000 in 1963) of 5% convertible subordinated debentures purchased for retirement .....	(2,390,446)	(197,295)
Balance at the end of the year .....	<u>\$ 32,893,214</u>	<u>\$ 34,725,267</u>

See accompanying notes page 34.



# AVCO CORPORATION AND SUBSIDIARIES

## Consolidated Financial Position

	November 30 <b>1964</b>	November 30 <b>1963</b>
<b>Assets</b>		
Cash .....	\$ 15,522,362	\$ 14,683,832
Marketable securities, at cost .....	8,466,214	26,050,667
Receivables		
U. S. government .....	47,635,594	57,584,136
Other .....	42,191,800	38,671,557
	89,827,394	96,255,693
Inventories, at the lower of cost or market		
U. S. government contracts and subcontracts ..	66,024,241	61,721,717
Less—Progress payments .....	(25,169,438)	(20,314,015)
Civilian .....	31,933,433	25,377,434
	72,788,236	66,785,136
<b>Total current assets</b> .....	186,604,206	203,775,328
Investments and other assets		
Subordinated notes receivable from Delta Acceptance Corporation Limited .....	3,000,000	—
Other, at cost .....	5,045,531	4,052,096
	8,045,531	4,052,096
Property, plant and equipment, at cost		
Land .....	1,880,496	1,681,105
Plant and equipment .....	109,254,588	101,681,890
Less—Accumulated depreciation .....	(65,293,513)	(60,588,495)
	45,841,571	42,774,500
Intangible assets, at cost less amortization .....	598,190	744,095
<b>Total assets</b> .....	<u>\$241,089,498</u>	<u>\$251,346,019</u>

See accompanying notes page 34.



	November 30 1964	November 30 1963
<b>Liabilities and Stockholders' Equity</b>		
Accounts payable and accrued liabilities .....	\$ 47,135,009	\$ 51,540,482
U.S. federal and Canadian income taxes .....	18,741,979	21,453,771
Long term debt installments due within one year .....	1,779,150	1,789,500
<b>Total current liabilities</b> .....	67,656,138	74,783,753
Long term debt (Note 2) .....	17,477,312	20,863,297
<b>Stockholders' equity</b>		
Preferred stock, without par value Authorized: 200,000 shares—none outstanding		
Common stock, par value \$3 per share Authorized: 15,000,000 shares Issued: 11,334,172 shares in 1964 and 11,279,413 in 1963 .....	34,002,516	33,838,239
Reserved in 1964 for Exchange for shares of Delta Acceptance Corporation Limited—2,868,444 shares of which 431,600 are held in treasury (Note 1) Conversion of convertible debentures at \$11.50 per share—374,982 shares Stock options—271,683 shares (Note 3)		
Additional paid-in capital .....	32,893,214	34,725,267
Retained earnings (Note 4) .....	98,717,899	87,135,463
	165,613,629	155,698,969
Less—cost of 431,600 shares of common stock held in treasury .....	9,657,581	—
<b>Total stockholders' equity</b> .....	155,956,048	155,698,969
<b>Total liabilities and stockholders' equity</b> ....	\$241,089,498	\$251,346,019

See accompanying notes page 34.



# NOTES TO FINANCIAL STATEMENTS

**Note 1:** On December 7, 1964 Avco's offer to exchange shares of Avco common stock for common and second preference stock of Delta Acceptance Corporation Limited became effective. By December 31, 1964, 2,764,689 Avco shares had been exchanged (or were in process of being exchanged) for Delta shares. Delta's accounts at and for the year ended November 30, 1964, which are shown in condensed form on Page 36, are not reflected in Avco's consolidated financial statements.

**Note 2:** At November 30, 1964 long term debt consisted of:

Notes due in annual installments of \$1,670,000 until September 1, 1970 when the balance of \$5,450,000 is due (average interest rate—3.68%) .....	\$13,800,000
5% convertible subordinated debentures maturing February 1, 1979 .....	4,312,300
Fifteen year 5% first mortgage sinking fund bonds, Series A, maturing November 1, 1966 (payable in Canadian currency) .....	311,662
5½% secured loan due in semi-annual installments	

commencing December 31, 1966 (payable in British currency) .....	832,500
	<u>19,256,462</u>
Less: Installments due within one year (included in current liabilities) .....	1,779,150
	<u>\$17,477,312</u>

An agreement with a group of banks provides the Company a revolving line of credit of \$20,000,000 until September 1, 1965.

**Note 3:** At November 30, 1964 there were reserved under a stock option plan approved by stockholders 271,683 shares of common stock against which options were outstanding on 149,468 shares of which options on 123,371 shares were then exercisable. The prices of the outstanding options, which were above the market prices on the dates the options were granted, aggregate \$3,123,285 and the options expire at various dates from January 20, 1965 to November 20, 1968.

At November 30, 1963 there were reserved under the plan 309,470 shares against which options on 190,038 shares were then outstanding. During the 1964 fiscal year no options were granted, 37,787 shares were issued on exercise of options and options on 2,783 shares expired.

**Note 4:** After considering the effect of the exchange of Avco shares for Delta shares (See Note 1), \$30,758,778 of the retained earnings at November 30, 1964 were not restricted as to the payment of cash dividends on common stock under the agreements, amended during the year, relating to long term debt and the bank credit.

**Note 5:** Under a plan approved by stockholders, there is payable as extra compensation 10% of the amount by which consolidated manufacturing profit (as defined) exceeds 6% of consolidated manufacturing capital (as defined) both as determined by the Company's independent auditors.

**Note 6:** The investment tax credit for 1964, which is not material in amount, has been applied as a reduction of the provision for U. S. federal income tax. The latter provision for 1964 also reflects a reduction, not material in amount, for the accumulated investment tax credits of prior years, which had previously been deferred, principally as a reduction of the related property.

**Note 7:** The Company has in effect non-contributory pension plans covering certain hourly employees. Unfunded past service costs, which are being funded over a period of 30 years, were approximately \$9,800,000 at November 30, 1964.



# Avco CORPORATION AND SUBSIDIARIES

## Source and Disposition of Working Capital

	Year ended November 30	Year ended November 30
Sources of Working Capital	1964	1963
Net earnings .....	\$22,644,540	\$22,432,997
Depreciation .....	6,234,061	6,506,776
Common stock options exercised .....	530,323	1,604,064
<b>Total</b> .....	<u>29,408,924</u>	<u>30,543,837</u>
Disposition of Working Capital		
Cash dividends paid .....	11,062,104	8,958,315
Treasury stock purchased .....	9,657,581	—
Convertible debentures purchased .....	4,620,446	386,295
Notes of Delta Acceptance Corporation Limited purchased .....	3,000,000	—
Net additions to property, plant and equipment ..	9,301,132	8,005,693
Reduction in long term debt other than convert- ible debentures .....	946,650	1,789,500
Other—net .....	864,518	30,423
<b>Total</b> .....	<u>39,452,431</u>	<u>19,170,226</u>
<b>Increase (Decrease) in Working Capital</b>	<u>(\$10,043,507)</u>	<u>\$11,373,611</u>



# DELTA ACCEPTANCE CORPORATION LIMITED AND SUBSIDIARIES

## Condensed Financial Information

(Stated in U. S. dollars — Note 1)

### Consolidated Financial Position at November 30, 1964

Assets		Liabilities and Stockholders' Equity	
Cash . . . . .	\$ 12,848,032	Notes payable within one year . . . . .	\$126,068,135
Contracts receivable . . . . .	227,485,264	Other current liabilities . . . . .	11,505,587
Less—Allowance for losses . . . . .	(3,573,834)	<b>Total current liabilities . . . . .</b>	<b>137,573,722</b>
Unearned discount and service charges . . . . .	(24,572,849)	Notes and debentures payable less amounts included in current liabilities . . . . .	57,950,975
	<u>199,338,581</u>	<b>Stockholders' equity (Note 2)</b>	
Other current assets . . . . .	1,531,300	First preference 5½-6% cumulative stock . . . . .	6,909,750
<b>Total current assets . . . . .</b>	<b>213,717,913</b>	Second preference 5½% cumulative convertible stock . . . . .	9,250,000
Net assets of insurance subsidiaries . . . . .	2,329,478	Common stock . . . . .	10,171,341
Excess of cost of investments in subsidiaries over net assets at dates of acquisition . . . . .	4,855,162	Retained earnings . . . . .	237,559
Other assets . . . . .	1,190,794	<b>Total stockholders' equity . . . . .</b>	<b>26,568,650</b>
<b>Total assets . . . . .</b>	<b>\$222,093,347</b>	<b>Total liabilities and stockholders' equity . . . . .</b>	<b>\$222,093,347</b>

### Consolidated Earnings, Year ended November 30, 1964

Interest, discount and service charges of finance companies . . . . .	\$28,804,044
Income of insurance companies before income taxes . . . . .	364,972
	<u>29,169,016</u>
<b>Expenses</b>	
Interest . . . . .	8,607,806
Allowance for losses on collection of contracts . . . . .	3,674,749
Other operating expenses . . . . .	11,423,405
U. S. and Canadian income taxes . . . . .	2,684,358
	<u>26,390,318</u>
<b>Net Earnings . . . . .</b>	<b>2,778,698</b>
Cash dividends paid on preference stock (Note 2) . . . . .	807,440
Increase in retained earnings . . . . .	1,971,258
Deficit at the beginning of the year . . . . .	1,733,699
Retained earnings at the end of the year . . . . .	<u>\$ 237,559</u>

**Note 1:** Canadian dollar amounts have been translated to U. S. dollars at appropriate rates. At November 30, 1964, \$67,987,413 of current assets were represented by accounts to be settled in U. S. funds. Of the notes and debentures payable at November 30, 1964, \$157,421,000 were payable in U. S. funds and \$26,598,110 were payable in Canadian funds.

**Note 2:** On December 7, 1964, Avco's offer to exchange shares of Avco common stock for common and second preference stock of Delta became effective. By December 31, 1964, Delta stock not acquired (or in process of being acquired) by Avco consisted of 74,700 first preference shares, 18,322 second preference shares of a total of 100,000 outstanding and 12,145 com-

mon shares of a total of 2,243,444 outstanding. The preference stock is redeemable at various future dates or subject to sinking fund requirements, or both. Annual dividend requirements on preference stock not acquired (or in process of being acquired) by Avco by December 31, 1964 aggregate approximately \$480,000.

At November 30, 1964 there were outstanding employee options to purchase 36,500 shares of Delta's common stock prior to December 31, 1969 at \$17.48 per share.

**Note 3:** See the heading "Delta Acceptance" on page 21 for information concerning litigation.

## FIVE YEAR FINANCIAL REVIEW

### Earnings Statistics

<i>Year ended Nov. 30</i>	<i>Net sales</i>	<i>Earnings before income taxes</i>	<i>U.S. federal and Canadian income taxes</i>	<i>Net earnings</i>	<i>Net earnings per share of common stock</i>	<i>Cash dividends per share of common stock</i>
<b>1964</b>	\$431,075,716	\$44,544,540	\$21,900,000	\$22,644,540	\$2.05	\$1.00
<b>1963</b>	514,132,435	46,792,997	24,360,000	22,432,997	2.00	.80
<b>1962</b>	414,280,128	41,037,265*	20,997,000*	20,040,265*	1.83*	.67½
<b>1961</b>	323,142,012	25,513,052	12,531,000	12,982,052	1.24	.57½
<b>1960</b>	322,744,957	19,300,001	9,278,500	10,021,501	.97	.50

\*Profit on the sale of substantially all of the assets of Crosley Broadcasting of Atlanta, Inc. increased earnings before income taxes by \$1,696,989, U. S. federal income tax by \$447,000 and net earnings by \$1,249,989 or \$.11 per share.

### Financial Position Statistics

<i>Nov. 30</i>	<i>Working capital</i>	<i>Stockholders' equity</i>	<i>Stockholders' equity per share of common stock</i>
<b>1964</b>	\$118,948,068	\$155,956,048	\$14.30
<b>1963</b>	128,991,575	155,698,969	13.80
<b>1962</b>	117,617,964	139,696,647	12.62
<b>1961</b>	107,761,849	123,930,674	11.46
<b>1960</b>	98,361,230	111,405,568	10.80



